

WHAT WE CLAIM IS:

- Sub B1
1. A multilayer thin film formed on an Si substrate by epitaxial growth, which comprises:
a buffer layer formed on said Si substrate, which layer
5 includes an oxide thin film,
a perovskite oxide thin film formed on said buffer layer,
which film has a (100) or (001) orientation, and
a ferroelectric thin film epitaxially grown on said
perovskite oxide thin film.
- Sub C1
10 2. The multilayer thin film of claim 1, wherein said perovskite oxide thin film has insulating properties.
3. The multilayer thin film of claim 1, which has an electrically conductive thin film between said perovskite oxide thin film and said oxide thin film in said buffer layer.
- 15 4. The multilayer thin film of claim 1, wherein said perovskite oxide thin film comprises PbTiO_3 .
- Sub B2
5. The multilayer thin film of claim 1, wherein said ferroelectric oxide thin film comprises PZT.
- 20 6. An electron device comprising a multilayer thin film as recited in claim 1.
- Sub B3
7. A multilayer thin film fabrication process by:
forming a buffer layer including an oxide thin film on an
Si (100) substrate,
epitaxially growing a perovskite oxide thin film having a
25 (100) or (001) orientation on said buffer layer, and
epitaxially growing a ferroelectric thin film on said perovskite oxide thin film.
- Add B4